In the Claims: Please amend the claims as shown:

We claim:

Claims 1.–78. (Cancelled)

Claim 79. (Previously Presented) The recognition molecule according to claim 89 wherein the antibody framework sequence comprises

a) FRH1, FRH2, FRH3 and FRH4 (SEQ ID NO: 82) comprising the following amino acid sequences, the amino acid position corresponding to the numbering according to Kabat:

for FRH1 in position (SEQ ID NO: 84)	1	E
	2	V
	3	K
	4	L
	5	V
	6	E
	7	S
	8	G
	9	G
	10	G
	11	L
	12	V
	13	Q
	14	P
	15	G
	16	G
	17	S
	18	M
	19	K
	20	L
	21	S
	22	C
	23	A or V
	24	A, V, S or T
	25	S

	26	G
	27	Y, F, S or D
	28	T
	29	F, L or I
	30	S
for FRH2 in position (SEQ ID NO: 85)	36	W
	37	V
	38	R
	39	Q
	40	S
	41	P
	42	E
	43	K
	44	G
	45	L
	46	E
	47	W
	48	V
	49	A
for FRH3 in position (SEQ ID NO: 86)	66	R
	67	F
	68	T
	69	I
	70	S
	71	R
	72	D
	73	D or V
	74	S
	75	K
	76	S
	77	S
	78	V
	79	Y or S
	80	L

	81	Q
	82	M
	82a	N
	82b	N
	82c	L
	83	R
	84	A or V
	85	E
	86	D
	87	T
	88	G
	89	I
	90	Y
	91	Y
	92	C
	93	T
	94	R, G, N, K or S
for FRH4 in position (SEQ ID NO: 87)	103	W
	104	G
	105	Q
	106	G
	107	T
	108	T
	109	L
	110	T
	111	V
	112	S
	113	S or A

and

b) FRL1, FRL2, FRL3 and FRL4 (SEQ ID NO: 83) comprising the following amino acid sequences, the amino acid position corresponding to the numbering according to Kabat:

for FRL1 in position (SEQ ID NO: 88)	1	D
	2	I, V or L
	3	V

	4	M or L
	5	T
	6	Q
	7	T or A
	8	P or A
	9	L or F
	10	S
	11	L or N
	12	P
	13	V
	14	S or T
	15	L
	16	G
	17	D or T
	18	Q or S
	19	A
	20	S
	21	I
	22	S
	23	C
for FRL2 in position (SEQ ID NO: 89)	35	W
	36	Y
	37	L
	38	Q
	39	K
	40	P
	41	G
	42	Q or L
	43	S
	44	P
	45	K or Q
	46	L
	47	L
	48	I or V

	49	Y
for FRL3 in position (SEQ ID NO: 90)	57	G
	58	V
	59	P
	60	D
	61	R
	62	F
	63	S
	64	G or S
	65	S
	66	G
	67	S
	68	G
	69	T
	70	D
	71	F
	72	T
	73	L
	74	K or R
	75	I
	76	S
	77	R
	78	V
	79	E
	80	A
	81	E
	82	D
	83	L or V
	84	G
	85	V
	86	Y
	87	Y
	88	C
for FRL4 in position (SEQ ID NO: 91)	98	F

99 G

100 G or D

101 G

102 T

103 K

104 L

105 E

106 I or L

106aK

107 R

108 A.

Claim 80. (Currently Amended) The recognition molecule according to claim 95 which comprises ~~a combination of~~ SEQ ID NO: 33 and SEQ ID NO: 35, or a humanized variant thereof.

Claim 81. (Previously Presented) The recognition molecule according to claim 90 which comprises a single-chain antibody fragment, a multibody, a Fab fragment, a fusion protein of an antibody fragment with a peptide or a protein or an immunoglobulin molecule of the IgG, IgM, IgA, IgE, IgD isotype or a subclass thereof.

Claim 82. (Previously Presented) A construct comprising the recognition molecule of claim 81 which is fused, chemically coupled, covalently or non-covalently associated with

(i) an immunoglobulin domain of various species,

(ii) an enzyme molecule,

(iii) an interaction domain,

(iv) a domain for stabilization,

(v) a signal sequence,

(vi) a fluorescent dye,

(vii) a toxin,

(viii) a catalytic antibody,

(ix) an antibody molecule or a fragment thereof with different specificity,

(x) a cytolytic component,

(xi) an immunomodulator,

(xii) an immunoeffector,

(xiii) an MHC class I or class II antigen,

(xiv) a chelating agent for radioactive labeling,

(xv) a radioisotope,

(xvi) a liposome,

(xvii) a transmembrane domain,

(xviii) a virus or

(xix) a cell.

Claim 83. (Previously Presented) A method for the production of the recognition molecule according to claim 87, comprising:

(i) incorporating one or more nucleic acid molecules encoding the amino acid sequence of at least one recognition molecule in a virus or in a host cell;

(ii) culturing the host cells or viruses under suitable conditions; and

(iii) obtaining the recognition molecule from the effector cell bearing the recognition molecule or the virus, wherein said recognition molecule specifically binds to the glycosylated MUC1 tumor epitope.

Claim 84. (Cancelled)

Claim 85. (Previously Presented) The method according to claim 93, wherein the recognition molecule comprises an immunoglobulin IgG molecule or a fragment thereof.

Claim 86. (Previously Presented) The method according to claim 93, wherein the recognition molecule comprises a multibody.

Claim 87. (Currently Amended) A recombinant ~~or a synthetic~~ recognition molecule which comprises the amino acid sequences set forth in SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 9 and SEQ ID NO: 11 and which specifically binds to a glycosylated MUC1 tumor epitope.

Claim 88. (Currently Amended) A recombinant ~~or a synthetic~~ recognition molecule comprising the amino acid sequences set forth in (a)–(f), wherein

(a) comprises SEQ ID NO. 1 or an equivalent canonical structure variant thereof;

(b) comprises SEQ ID NO. 3 or an equivalent canonical structure variant thereof;

(c) comprises SEQ ID NO: 5;

(d) comprises SEQ ID NO. 7 or an equivalent canonical structure variant thereof;

(e) comprises SEQ ID NO: 9; and

(f) comprises SEQ ID NO. 11 or an equivalent canonical structure variant thereof;

and wherein the recognition molecule specifically binds to a glycosylated MUC1 tumor epitope.

Claim 89. (Previously Presented) The recognition molecule according to claim 87 further comprising one or more antibody framework sequences which separate, enclose and/or flank said amino acid sequences.

Claim 90. (Currently Amended) The recognition molecule according to claim 87, which comprises ~~a combination of~~ SEQ ID NO: 33 and SEQ ID NO: 35, or a humanized variant thereof.

Claim 91. (Currently Amended) The recognition molecule according to claim 87, which comprises at least one sequence set forth in SEQ ID NOs 36 to 47, SEQ ID NO: 60, SEQ ID NO: 62, SEQ ID NO: 64, SEQ ID NO: 66 or SEQ ID NO: 68, or a humanized variant thereof.

Claim 92. (Previously Presented) A composition comprising

(i) at least one recognition molecule according to claim 87; and/or

(ii) at least one construct comprising the recognition molecule of claim 87 which is fused, chemically coupled, or covalently or non-covalently associated with

(i) an immunoglobulin domain of various species,

(ii) an enzyme molecule,

(iii) an interaction domain,

(iv) a domain for stabilization,

(v) a signal sequence,

(vi) a fluorescent dye,

(vii) a toxin,

(viii) a catalytic antibody,

(ix) an antibody molecule or a fragment thereof with different specificity,

(x) a cytolytic component,

(xi) an immunomodulator,

(xii) an immunoeffector,

(xiii) an MHC class I or class II antigen,

(xiv) a chelating agent for radioactive labeling,

(xv) a radioisotope,

(xvi) a liposome,

(xvii) a transmembrane domain,

(xviii) a virus or

(xix) a cell;

and/or

(iii) at least one nucleic acid molecule which encodes the recognition molecule of claim 87;

together with a pharmaceutically tolerable carrier and/or adjuvant.

Claim 93. (Currently Amended) A method for ~~preventing,~~ diagnosing, reducing, treating, following-up and/or after-caring tumor diseases and/or metastases in a subject in need thereof comprising administering to said subject a recognition molecule according to claim 87.

Claim 94. (Currently Amended) An *in vitro* method for the diagnosis ~~and/or prediction~~ of a tumor comprising detecting a glycosylated MUC1 tumor epitope with at least one recognition molecule according to claim 87.

Claim 95. (Currently Amended) A recombinant ~~or a synthetic~~ recognition molecule comprising an amino acid sequence which contains the amino acid sequences of SEQ ID NOs. 2, 4, 6, 8, 10 and 12, and which specifically binds to a glycosylated MUC1 tumor epitope.

Claim 96. (Currently Amended) A recombinant ~~or a synthetic~~ recognition molecule comprising the amino acid sequences set forth in (a)–(f), wherein

(a) comprises SEQ ID NO. 2 or an equivalent canonical structure variant thereof;

(b) comprises SEQ ID NO. 4 or an equivalent canonical structure variant thereof;

(c) comprises SEQ ID NO: 6;

(d) comprises SEQ ID NO. 8 or an equivalent canonical structure variant thereof;

(e) comprises SEQ ID NO: 10; and

(f) comprises SEQ ID NO. 12 or an equivalent canonical structure variant thereof;

and wherein the recognition molecule specifically binds to a glycosylated MUC1 tumor epitope.

Claim 97. (Previously Presented) The recognition molecule according to claim 95 further comprising one or more antibody framework sequences which separate, enclose and/or flank said amino acid sequences.

Claim 98. (Previously Presented) The recognition molecule according to claim 97, wherein the antibody framework sequence comprises

a) FRH1, FRH2, FRH3 and FRH4 (SEQ ID NO: 82) comprising the following amino acid sequences, the amino acid position corresponding to the numbering according to Kabat:

for FRH1 in position (SEQ ID N: 84)	1	E
	2	V
	3	K
	4	L
	5	V
	6	E
	7	S
	8	G
	9	G
	10	G
	11	L
	12	V
	13	Q
	14	P
	15	G
	16	G
	17	S
	18	M
	19	K
	20	L
	21	S
	22	C
	23	A or V
	24	A, V, S or T
	25	S

	26	G
	27	Y, F, S or D
	28	T
	29	F, L or I
	30	S
for FRH2 in position (SEQ ID N: 85)	36	W
	37	V
	38	R
	39	Q
	40	S
	41	P
	42	E
	43	K
	44	G
	45	L
	46	E
	47	W
	48	V
	49	A
for FRH3 in position (SEQ ID N: 86)	66	R
	67	F
	68	T
	69	I
	70	S
	71	R
	72	D
	73	D or V
	74	S
	75	K
	76	S
	77	S
	78	V
	79	Y or S
	80	L

	81	Q
	82	M
	82a	N
	82b	N
	82c	L
	83	R
	84	A or V
	85	E
	86	D
	87	T
	88	G
	89	I
	90	Y
	91	Y
	92	C
	93	T
	94	R, G, N, K or S
for FRH4 in position (SEQ ID N: 87)	103	W
	104	G
	105	Q
	106	G
	107	T
	108	T
	109	L
	110	T
	111	V
	112	S
	113	S or A

and

b) FRL1, FRL2, FRL3 and FRL4 (SEQ ID NO: 83) comprising the following amino acid sequences, the amino acid position corresponding to the numbering according to Kabat:

for FRL1 in position (SEQ ID N: 88)	1	D
	2	I, V or L
	3	V

	4	M or L
	5	T
	6	Q
	7	T or A
	8	P or A
	9	L or F
	10	S
	11	L or N
	12	P
	13	V
	14	S or T
	15	L
	16	G
	17	D or T
	18	Q or S
	19	A
	20	S
	21	I
	22	S
	23	C
for FRL2 in position (SEQ ID N: 89)	35	W
	36	Y
	37	L
	38	Q
	39	K
	40	P
	41	G
	42	Q or L
	43	S
	44	P
	45	K or Q
	46	L
	47	L
	48	I or V

	49	Y
for FRL3 in position (SEQ ID N: 90)	57	G
	58	V
	59	P
	60	D
	61	R
	62	F
	63	S
	64	G or S
	65	S
	66	G
	67	S
	68	G
	69	T
	70	D
	71	F
	72	T
	73	L
	74	K or R
	75	I
	76	S
	77	R
	78	V
	79	E
	80	A
	81	E
	82	D
	83	L or V
	84	G
	85	V
	86	Y
	87	Y
	88	C
for FRL4 in position (SEQ ID N: 91)	98	F

99 G

100 G or D

101 G

102 T

103 K

104 L

105 E

106 I or L

106a K

107 R

108 A.

Claim 99. (Previously Presented) The recognition molecule according to claim 80, wherein it comprises a single-chain antibody fragment, a multibody, a Fab fragment, a fusion protein of an antibody fragment with peptides or proteins and/or an immunoglobulin of the IgG, IgM, IgA, IgE, IgD isotypes and/or subclasses thereof.

Claim 100. (Currently Amended) The recognition molecule according to claim 95, ~~wherein it~~ which comprises at least one sequence in accordance with SEQ ID Nos. 48 to 59, SEQ ID Nos. 61, 63, 65, 67 or 69 or humanized variants of said sequences.

Claim 101. (Previously Presented) A construct comprising a recognition molecule according to claim 99 which is fused, chemically coupled, or covalently or non-covalently associated with

(i) an immunoglobulin domain of various species,

(ii) an enzyme molecule,

(iii) an interaction domain,

(iv) a domain for stabilization,

(v) a signal sequence,

(vi) a fluorescent dye,

(vii) a toxin,

(viii) a catalytic antibody,

(ix) an antibody molecule or a fragment thereof with different specificity,

(x) a cytolytic component,

(xi) an immunomodulator,

(xii) an immunoeffector,

(xiii) an MHC class I or class II antigen,

(xiv) a chelating agent for radioactive labeling,

(xv) a radioisotope,

(xvi) a liposome,

(xvii) a transmembrane domain,

(xviii) a virus or

(xix) a cell.

Claim 102. (Previously Presented) A composition comprising

(i) at least one recognition molecule according to claim 95; and/or

(ii) a construct comprising at least one recognition molecule of claim 95 which is fused, chemically coupled, or covalently or non-covalently associated with

(i) an immunoglobulin domain of various species,

(ii) an enzyme molecule,

(iii) an interaction domain,

(iv) a domain for stabilization,

(v) a signal sequence,

(vi) a fluorescent dye,

(vii) a toxin,

(viii) a catalytic antibody,

(ix) an antibody molecule or a fragment thereof with different specificity,

(x) a cytolytic component,

(xi) an immunomodulator,

(xii) an immunoeffector,

(xiii) an MHC class I or class II antigen,

(xiv) a chelating agent for radioactive labeling,

(xv) a radioisotope,

(xvi) a liposome,

(xvii) a transmembrane domain,

(xviii) a virus or

(xix) a cell;

and/or

(iii) at least one nucleic acid molecule which encodes the recognition molecule of claim

95;

together with a pharmaceutically tolerable carrier and/or adjuvant.

Claim 103. (Previously Presented) A method for the production of recognition molecules according to claim 95 comprising:

(i) incorporating one or more nucleic acid molecules encoding the amino acid sequence of at least one recognition molecule according to claim 95 in a virus or in a host cell;

(ii) culturing the host cells or viruses under suitable conditions; and

(iii) obtaining the recognition molecule the effector cell bearing the recognition molecule or construct, or the virus, which specifically recognize the glycosylated MUC1 tumor epitope.

Claim 104. (Currently Amended) A method for ~~preventing,~~ diagnosing, reducing, treating, following-up and/or after-caring tumor diseases and/or metastases in a subject in need thereof comprising administering to said subject a recognition molecule according to claim 95.

Claim 105. (Previously Presented) The method according to claim 104, wherein the recognition molecule comprises an immunoglobulin IgG molecule or a fragment thereof.

Claim 106. (Previously Presented) The method according to claim 104, wherein the recognition molecule comprises a multibody.

Claim 107. (Currently Amended) An *in vitro* method for the diagnosis ~~and/or prediction~~ of a tumor comprising detecting a glycosylated MUC1 tumor epitope with at least one recognition molecule according to claim 95.

Claim 108. (Previously Presented) A method for the production of the construct according to claim 82 comprising:

(i) incorporating one or more nucleic acid molecules encoding the amino acid sequence of at least one construct comprising said recognition molecule in a virus or in a host cell;

(ii) culturing the host cells or viruses under suitable conditions; and

(iii) obtaining the construct, the effector cell bearing the recognition molecule or construct, or the virus, which specifically recognize the glycosylated MUC1 tumor epitope.

Claim 109. (Currently Amended) A method for ~~preventing,~~ diagnosing, reducing, treating, following-up and/or after-caring tumor diseases and/or metastases in a subject in need thereof comprising administering to said subject a construct according to claim 82.

Claim 110. (Previously Presented) An *in vitro* method for the diagnosis ~~and/or prediction~~ of a tumor comprising detecting a glycosylated MUC1 tumor epitope with at least one construct according to claim 82.

Claim 111. (Currently Amended) A method for ~~preventing,~~ diagnosing, reducing, treating, following-up and/or after-caring tumor diseases and/or metastases in a subject in need thereof comprising administering to said subject a composition according to claim 92.

Claim 112. (Currently Amended) An *in vitro* method for the diagnosis ~~and/or prediction~~ of a tumor comprising detecting a glycosylated MUC1 tumor epitope with a composition according to claim 92.

Claim 113. (Previously Presented) The recognition molecule according to claim 87 wherein the glycosylated MUC1 tumor epitope comprises a glycosylated PDTRP (SEQ ID NO: 81) region within a MUC1 tandem repeat sequence and is glycosylated with GalNAc or Gal-GalNAc on the PDTRP (SEQ ID NO: 81) threonine.

Claim 114. (Previously Presented) The recognition molecule according to claim 95 wherein the glycosylated MUC1 tumor epitope comprises a glycosylated PDTRP (SEQ ID NO: 81) region within a MUC1 tandem repeat sequence and is glycosylated with GalNAc or Gal-GalNAc on the PDTRP (SEQ ID NO: 81) threonine.

Claim 115. (Previously Presented) The recognition molecule according to claim 113 wherein the glycosylated MUC1 tumor epitope comprises $A[HGVTSAPDT(GalNAc\alpha)RPAPGSTAPPA]_n$ wherein n=1, 3, or 5 (SEQ ID NO: 73).

Claim 116. (Previously Presented) The recognition molecule according to claim 114 wherein the glycosylated MUC1 tumor epitope comprises $A[HGVTSAPDT(GalNAc\alpha)RPAPGSTAPPA]_n$ wherein n=1, 3, or 5 (SEQ ID NO: 73).

Claim 117. (Previously Presented) A recombinant recognition molecule which comprises the amino acid sequences set forth in SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 9 and SEQ ID NO: 11 and which specifically binds to a glycosylated MUC1 tumor epitope.

Claim 118.–121 (Cancelled)

Claim 122. (Previously Presented) The recognition molecule of claim 88, wherein the equivalent canonical structure variant of SEQ ID NO: 1 comprises SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, or SEQ ID NO: 20.

Claim 123. (Previously Presented) The recognition molecule of claim 88, wherein the equivalent canonical structure variant of SEQ ID NO: 3 comprises SEQ ID NO: 21.

Claim 124. (Previously Presented) The recognition molecule of claim 88, wherein the equivalent canonical structure variant of SEQ ID NO: 7 comprises SEQ ID NO: 24, SEQ ID NO: 25, or SEQ ID NO: 26.

Claim 125. (Previously Presented) The recognition molecule of claim 88, wherein the equivalent canonical structure variant of SEQ ID NO: 11 comprises SEQ ID NO: 30.

Claim 126. (Previously Presented) The recognition molecule of claim 96, wherein the equivalent canonical structure variant of SEQ ID NO: 2 comprises SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, or SEQ ID NO: 16.

Claim 127. (Previously Presented) The recognition molecule of claim 96, wherein the equivalent canonical structure variant of SEQ ID NO: 4 comprises SEQ ID NO: 22 or SEQ ID NO: 23.

Claim 128. (Previously Presented) The recognition molecule of claim 96, wherein the equivalent canonical structure variant of SEQ ID NO: 8 comprises SEQ ID NO: 27, SEQ ID NO: 28, or SEQ ID NO: 29.

Claim 129. (Previously Presented) The recognition molecule of claim 96, wherein the equivalent

canonical structure variant of SEQ ID NO: 12 comprises SEQ ID NO: 31.